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EXAMINER

BRUCKART, BENJAMIN R

ART UNIT PAPER NUMBER

2155

DATE MAILED: 09/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/708,492

Applicant(s)

LAU, PUI LUN

Examiner

Benjamin R. Bruckart

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 and 33-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 and 33-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 20050805.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

PD

Detailed Action

Status of Claims:

Claims 1-31, 33-46 are pending in this Office Action.

Claims 1, 12, 22, 30, 31, 33, and 40 are amended.

Claim 46 is new.

Claim 32 is cancelled.

Response to Arguments

With regards to claims 11 and 30 applicant's arguments filed in the amendment filed 8/3/05, have been fully considered but they are not persuasive. The reasons are set forth below.

With regards to claims 1, 22, and 40 applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Applicant's invention as claimed:

Claims 11-15, 17, 19, 30-34, 36, 38-39 remain rejected under 35 U.S.C 103(a) as being unpatentable by U.S. Patent No. 5,781,549 by Dai in view of U.S. Patent No 5,287,461 by Moore.

Regarding claim 11,

The Dai reference teaches a computer architecture comprising:

plural computers (Dai: col. 4, lines 38-43, Figure 1; DTEs are computers connected to the switch);

plural peripheral devices (Dai: col. 4, lines 38-43, Figure 1; DTEs are devices connected to the switch); and

a multiple port unit having plural network ports (Dai: col. 2, lines 25-33, col. 4, lines 38-43) and a control unit (Dai: col. 2, lines 48-59), each of said network ports being coupled to one of said plural computers over a respective network link (Dai: col. 4, lines 38-43, Figure 1 shows the network coupling the DTEs, DTEs taken to be devices like computers), said control unit being configured to interrogate the network links and to communicatively couple said ports to a selected one of said network ports based on the interrogation of the network links (Dai: col. 2, lines 48-59).

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The Moore reference teaches plural serial communication ports (Moore: col. 3, lines 42-57) each of said communication serial ports being coupled to a peripheral device (Moore: col. 3, lines 42-57).

The Moore reference further teaches the serial console line for each server has the capability to transmit to and receive from a serial port with another device (Moore: col. 2, lines 40-45).

Therefore it would have been obvious at the time of the invention to one of ordinary skill in the art to create the multiple port packet switch as taught by Dai while employing the use of serial ports as taught by Moore in order to transmit and receive with a serial port and other devices (Moore: col. 2, lines 40-45).

Claims 12-15, 17, 19-20 are rejected under the same rationale given above. In the rejections set fourth, the examiner will address the additional limitations and point to the relevant teachings of Dai and Moore.

Regarding claim 12, a computer architecture as recited in claim 11, wherein said control unit is configured to interrogate each of the plural computers and to control the peripheral devices based on the interrogation of the computers (Dai: col. 2, lines 48-59; Moore: col. 2, lines 45-53).

Regarding claim 13, a computer architecture as recited in claim 12, wherein said control unit interrogates the computers over each of the network links in an alternating manner (Dai: col. 8, lines 43-54; alternating putting data on the bus for processing).

Regarding claim 14, a computer architecture as recited in claim 13, wherein said network ports comprise Ethernet ports (Dai: col. 2, lines 25-33).

Regarding claim 15, a computer architecture as recited in claim 14, wherein said communication serial ports comprise serial interfaces (Moore: col. 3, lines 42-57).

Regarding claim 17, a computer architecture as recited in claim 11, wherein said control unit is configured to interrogate said network links using a network carrier signal (Dai: col. 8, lines 33-54 where the carrier signal is modulated with the clock cycle).

Regarding claim 19, a computer architecture as recited in claim 12, comprising two network ports and 8 communications ports (Dai: col. 2, lines 25-33; Ethernet ports and Moore: col. 3, lines 42-57).

Regarding claim 30,

The Dai reference teaches a multiple port unit adapted for coupling one or more computers to multiple peripheral devices over a network (Dai: col. 4, lines 38-43, Figure 1), said multiple port unit comprising:

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plural network ports (Dai: col. 2, lines 25-33; col. 4, lines 38-43), each of said network ports being configured to couple the multiple port unit to a computer over a respective network link (Dai: col. 2, lines 25-33; col. 4, lines 38-43; Ethernet ports form network links);

control means for interrogating the network links and communicatively coupling said ports to a selected one of said network ports based on the interrogation of the network links (Dai: col. 2, lines 48-59); and

wherein said control means interrogates plural computers over each of the network links in an alternating manner (Dai: col. 8, lines 43-54; alternating putting data on the bus for processing).

The Dai reference does not explicitly state serial ports.

The Moore reference teaches plural communication serial ports, each of said communication serial ports being configured to couple the multiple port unit to a peripheral device (Moore: col. 3, lines 42-57).

The Moore reference further teaches the serial console line for each server has the capability to transmit to and receive from a serial port with another device (Moore: col. 2, lines 40-45).

Therefore it would have been obvious at the time of the invention to one of ordinary skill in the art to create the multiple port packet switch as taught by Dai while employing the use of serial ports as taught by Moore in order to transmit and receive with a serial port and other devices (Moore: col. 2, lines 40-45).

Claims 32-34, 36, 38-39 are rejected under the same rationale given above. In the rejections set forth, the examiner will address the additional limitations and point to the relevant teachings of Moore and Dai.

Regarding claim 31, a multiple port unit as recited in claim 30, wherein said network ports are configured to couple the multiple port unit to plural computers (Dai: col. 4, lines 38-43, Figure 1) and wherein said control means comprises computer interrogating means for interrogating each of the plural computers (Dai: col. 2, lines 48-59) designating a selected one of the computers as an active computer to control the peripheral devices based on the interrogation of the computers (Moore: col. 3, lines 33-41).

Regarding claim 33, a multiple port unit as recited in claim 31, wherein said network communication serial ports comprise Ethernet ports (Dai: col. 2, lines 25-33).

Regarding claim 34, a multiple port unit as recited in claim 33, wherein said communication serial ports comprise serial ports (Moore: col. 3, lines 42-57).

Regarding claim 36, a multiple port unit as recited in claim 30, wherein said control means comprises means for detecting a network carrier signal (Dai: col. 8, lines 33-54 where the carrier signal is modulated with the clock cycle).

Regarding claim 38, a multiple port unit as recited in claim 30, further comprising a data bus coupled to said control means (Dai: col. 2, lines 63- col. 3, line 2; Figures 2 tag 230), said

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network ports (Dai: col. 2, lines 63- col. 3, line 2; Figures 2 tag 230) and said communication serial ports (Dai: col. 2, lines 25-33)

Regarding claim 39, a multiple port unit as recited in claim 31, comprising two network ports and 8 communications ports (Dai: col. 2, lines 25-33; Ethernet ports and Moore: col. 3, lines 42-57).

Claims 1-5, 7, 9-10; 22-24, 26, 28-29, 40-42, 44-46 are rejected under 35 U.S.C 103(a) as being unpatentable by U.S. Patent No. 5,781,549 by Dai in view of U.S. Patent No 5,287,461 by Moore in further view of U.S. Patent No 6,189,043 by Buyukkoc et al.

Regarding claim 1,

The Dai reference teaches a multiple port unit adapted for coupling one or more computers to multiple peripheral devices over a network (Dai: col. 4, lines 38-43, Figure 1), said multiple port unit comprising:

plural network ports (Dai: col. 2, lines 25-33; col. 4, lines 38-43), each of said network ports being configured to couple the multiple port unit to a computer over a respective network link (Dai: col. 2, lines 25-33; col. 4, lines 38-43; where Ethernet ports are network ports); and

a control unit configured to interrogate the network links and to communicatively couple said ports to a selected one of said network ports based on the interrogation of the network links (Dai: col. 2, lines 48-59).

The Dai reference does not explicitly state serial ports or a control unit being configured to determine whether it is time to interrogate the network links.

The Moore reference teaches plural communication serial ports (Moore: col. 3, lines 42-57), each of said communication serial ports being configured to couple the multiple port unit to a peripheral device (Moore: col. 3, lines 58-65).

The Moore reference further teaches the serial console line for each server has the capability to transmit to and receive from a serial port with another device (Moore: col. 2, lines 40-45).

The Buyukkoc reference teaches a control unit being further configured to determine whether it is time to interrogate the network links (Buyukkoc: col. 7, lines 38-67; periodically broadcasts).

The Buyukkoc reference further teaches the invention provides a dynamic technique for assigning and reassigning servers based on activity to direct traffic (Buyukkoc: col. 1, lines 30-37; col. 2, lines 1-4).

Therefore it would have been obvious at the time of the invention to one of ordinary skill in the art to create the multiple port packet switch as taught by Dai while employing the use of serial ports as taught by Moore and configuring a control unit when to interrogate the links as taught by Buyukkoc in order to transmit and receive with a serial port and other devices in a dynamically changing environment (Moore: col. 2, lines 40-45).

Claims 2-5, 7, 9-10, 46 are rejected under the same rationale given above. In the rejections set fourth, the examiner will address the additional limitations and point to the relevant teachings of Dai, Buyukkoc, and Moore.

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Regarding claim 2, a multiple port unit as recited in claim 1, wherein said network ports are configured to couple the multiple port unit to plural computers and wherein said control unit is configured to interrogate each of the plural the computers and to control the peripheral devices based on the interrogation of the computers (Dai: col. 2, lines 48-59; Moore: col. 2, lines 45-53).

Regarding claim 3, a multiple port unit as recited in claim 2, wherein said control unit interrogates the computers over each of the network links in an alternating manner (Dai: col. 8, lines 43-54; alternating putting data on the bus for processing).

Regarding claim 4, a multiple port unit as recited in claim 3, wherein said network ports comprise Ethernet ports (Dai: col. 2, lines 25-33).

Regarding claim 5, a multiple port unit as recited in claim 4, wherein said communication serial ports comprise serial ports (Moore: col. 3, lines 42-57).

Regarding claim 7, a multiple port unit as recited in claim 1, where said control unit is configured to interrogate the network links using a network carrier signal (Dai: col. 8, lines 33-54 where the carrier signal is modulated with the clock cycle).

Regarding claim 9, a multiple port unit as recited in claim 2, comprising two network ports and 8 communications ports (Dai: col. 2, lines 25-33; Ethernet ports and Moore: col. 3, lines 42-57).

Regarding claim 10, a multiple port unit as recited in claim 2, further comprising a data bus coupled to said control unit (Dai: col. 2, lines 63- col. 3, line 2; Figures 2 tag 230), said network ports and said communication serial ports (Dai: Figure 2 tags 101-124 and tag 150; Moore: Figure 3).

Regarding claim 22,

The Dai reference teaches a multiple port unit adapted for coupling one or more computers to multiple intelligent electronic devices over a network (Dai: col. 4, lines 38-43, Figure 1), said multiple port unit comprising:

two Ethernet ports (Dai: col. 2, lines 25-33), each of said Ethernet ports being configured to couple the multiple port unit to a computer over a respective Ethernet link (Dai: col. 2, lines 25-33; col. 4, lines 38-43); and

a control unit configured to interrogate the Ethernet links and to communicatively couple said serial ports to a selected one of said Ethernet ports based on the interrogation of the Ethernet links (Dai: col. 2, lines 48-59).

The Dai reference does not explicitly state serial ports or a control unit being configured to determine whether it is time to interrogate the network links.

The Moore reference teaches plural communication serial ports (Moore: col. 3, lines 42-57), each of said communication serial ports being configured to couple the multiple port unit to a peripheral device (Moore: col. 3, lines 58-65).

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The Moore reference further teaches the serial console line for each server has the capability to transmit to and receive from a serial port with another device (Moore: col. 2, lines 40-45).

The Buyukkoc reference teaches a control unit being further configured to determine whether it is time to interrogate the network links (Buyukkoc: col. 7, lines 38-67; periodically broadcasts).

The Buyukkoc reference further teaches the invention provides a dynamic technique for assigning and reassigning servers based on activity to direct traffic (Buyukkoc: col. 1, lines 30-37; col. 2, lines 1-4).

Therefore it would have been obvious at the time of the invention to one of ordinary skill in the art to create the multiple port packet switch as taught by Dai while employing the use of serial ports as taught by Moore and configuring a control unit when to interrogate the links as taught by Buyukkoc in order to transmit and receive with a serial port and other devices in a dynamically changing environment (Moore: col. 2, lines 40-45).

Claims 23-24, 26, 28-29 are rejected under the same rationale given above. In the rejections set fourth, the examiner will address the additional limitations and point to the relevant teachings of Dai, Buyukkoc, and Moore.

Regarding claim 23, a multiple port unit as recited in claim 22, wherein said control unit is configured to interrogate each of the plural the computers and to designate a selected one of the computers as an active computer to control the intelligent electronic devices based on the interrogation of the computers (Dai: col. 2, lines 48-59).

Regarding claim 24, a multiple port unit as recited in claim 23, wherein said control unit interrogates the computers over each of the Ethernet links in an alternating manner (Dai: col. 8, lines 43-54; alternating putting data on the bus for processing).

Regarding claim 26, a multiple port unit as recited in claim 22, wherein said control unit is configured to interrogate the Ethernet links using an Ethernet carrier signal (Dai: col. 8, lines 33-54 where the carrier signal is modulated with the clock cycle).

Regarding claim 28, a multiple port unit as recited in claim 23, comprising 8 serial ports (Moore: col. 3, lines 42-57).

Regarding claim 29, a multiple port unit as recited in claim 22, further comprising a data bus coupled to said control unit (Dai: col. 2, lines 63- col. 3, line 2; Figures 2 tag 230), said Ethernet ports (Dai: col. 2, lines 25-33; Figure 1, tags 101-124), and said serial ports (Moore: col. 3, lines 42-57).

Regarding claim 40,

The Dai reference teaches a method of coupling plural peripheral devices to computers (Dai: col. 2, lines 25-33; col. 4, lines 38-43; Figure 1), said method comprising the steps of.

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interrogating the status of plural network connections with a control unit of a multiple port unit having plural network ports coupled to the plural network connections (Dai: col. 2, lines 25-33 48-59; col. 4, lines 38-43),

The Dai reference does not explicitly state serial ports or a control unit being determining whether it is time to interrogate prior to interrogating.

The Moore reference teaches plural communication serial ports (Moore: col. 3, lines 42-57), each of said communication serial ports being configured to couple the multiple port unit to a peripheral device (Moore: col. 3, lines 58-65).

The Moore reference further teaches the serial console line for each server has the capability to transmit to and receive from a serial port with another device (Moore: col. 2, lines 40-45).

The Buyukkoc reference teaches a control unit being further configured to determine whether it is time to interrogate the network links (Buyukkoc: col. 7, lines 38-67; periodically broadcasts).

The Buyukkoc reference further teaches the invention provides a dynamic technique for assigning and reassigning servers based on activity to direct traffic (Buyukkoc: col. 1, lines 30-37; col. 2, lines 1-4).

Therefore it would have been obvious at the time of the invention to one of ordinary skill in the art to create the multiple port packet switch as taught by Dai while employing the use of serial ports as taught by Moore and configuring a control unit when to interrogate the links as taught by Buyukkoc in order to transmit and receive with a serial port and other devices in a dynamically changing environment (Moore: col. 2, lines 40-45).

Claims 41-42, 44-45 are rejected under the same rationale given above. In the rejections set forth, the examiner will address the additional limitations and point to the relevant teachings of Moore, Buyukkoc, and Dai.

Regarding claim 41, a method as recited in claim 40 further comprising the steps of: interrogating the status of plural computers respectively coupled to the network connections (Dai: col. 2, lines 48-59); and

controlling the peripheral devices based on the results of said step of interrogating the status of plural computers (Dai: col. 2, lines 52-59).

Regarding claim 42, a method as recited in claim 41, wherein said step of interrogating the status of plural network connections comprises detecting a carrier on each network connection (Dai: col. 8, lines 33-54 where the carrier signal is a modulated signal with the clock cycle).

Regarding claim 44, a method as recited in claim 41, further comprising the step of maintaining a record of the status of each computer and each network connection in the control unit (Dai: col. 3, lines 3-5; col. 2, lines 55-59).

Regarding claim 45, a method as recited in claim 41, further comprising the step of transferring status data between the computers at the direction of the control unit (Dai: col. 8, lines 43-54).

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(New) Regarding claim 46, a multiple port unit as recited in claim 1, wherein the interrogation is effected by the control unit sending a packet (Buyukkoc: col. 7, lines 38-67; col. 10, lines 55-col. 11, line 11).

Claim 16, 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,781,549 by Dai in view of U.S. Patent No 5,287,461 by Moore in further view of U.S. Patent No. 5,761,084 by Edwards.

Regarding claim 16,

The Dai and Moore references teach a network switch that does packet segmentation and switching with a plurality of ports.

The Dai and Moore references do not explicitly state the use of two redundant power supplies.

The Edwards reference teaches two redundant power supplies (Edwards: col. 1, lines 53-58).

The Edwards reference further teaches in the event of a power outage it supplies power to a wide area network switch that couples others and avoids failure of routing (Edwards: col. 1, lines 31-49).

Therefore it would have been obvious at the time of the invention to one of ordinary skill in the art to create the multiple port packet switch as taught by Dai and Moore while employing the use of two redundant power supplies as taught by Edwards in order to avoid failure of routing services (Edwards: col. 1, lines 31-49).

Claim 35 is rejected under the same rationale given above.

Claims 6, 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,781,549 by Dai in view of U.S. Patent No 5,287,461 by Moore in further view of U.S. Patent No 6,189,043 by Buyukkoc et al in further view of U.S. Patent No. 5,761,084 by Edwards.

Regarding claim 6,

The Dai, Buyukkoc, and Moore references teach a network switch that does packet segmentation and switching with a plurality of ports.

The Dai, Buyukkoc, and Moore references do not explicitly state the use of two redundant power supplies.

The Edwards reference teaches two redundant power supplies (Edwards: col. 1, lines 53-58).

The Edwards reference further teaches in the event of a power outage it supplies power to a wide area network switch that couples others and avoids failure of routing (Edwards: col. 1, lines 31-49).

Therefore it would have been obvious at the time of the invention to one of ordinary skill in the art to create the multiple port packet switch as taught by Dai, Buyukkoc, and Moore while

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employing the use of two redundant power supplies as taught by Edwards in order to avoid failure of routing services (Edwards: col. 1, lines 31-49).

Claim 25 is rejected under the same rationale given above.

Claims 18 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,781,549 by Dai in view of U.S. Patent No 5,287,461 by Moore in further view of U.S. Patent No. 4,937,817 by Lin.

Regarding claim 18,

The Dai and Moore references teach a network switch that does packet segmentation and switching with a plurality of ports.

The Dai and Moore references do not explicitly state the use of the Packet Internet Groper when interrogating links.

The Lin reference teaches a multiple port unit as recited in claim 2 (Lin: Figure 2, tag 208), wherein said control unit is configured to interrogate the computers using Packet Internet Groper (Lin: col. 11, lines 64- col. 12, line 2; ping).

The Lin reference further teaches that periodic pinging monitors proper operation (Lin: col. 11, lines 64 - col. 12, line 2)

Therefore it would have been obvious at the time of the invention to one of ordinary skill in the art to create the multiple port packet switch as taught by Dai and Moore while employing the use of Packet Internet Groper (ping) as taught by Lin in order to monitor proper operation (Lin: col. 11, lines 64 - col. 12, line 2).

Claim 37 is rejected under the same rationale given above.

Claims 8, 27, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,781,549 by Dai in view of U.S. Patent No 5,287,461 by Moore in further view of U.S. Patent No 6,189,043 by Buyukkoc et al in in further view of U.S. Patent No. 4,937,817 by Lin.

Regarding claim 8,

The Dai, Buyukkoc, and Moore references teach a network switch that does packet segmentation and switching with a plurality of ports.

The Dai, Buyukkoc, and Moore references do not explicitly state the use of the Packet Internet Groper when interrogating links.

The Lin reference teaches a multiple port unit as recited in claim 2 (Lin: Figure 2, tag 208), wherein said control unit is configured to interrogate the computers using Packet Internet Groper (Lin: col. 11, lines 64- col. 12, line 2; ping).

The Lin reference further teaches that periodic pinging monitors proper operation (Lin: col. 11, lines 64 - col. 12, line 2)

Therefore it would have been obvious at the time of the invention to one of ordinary skill in the art to create the multiple port packet switch as taught by Dai, Buyukkoc, and Moore while

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employing the use of Packet Internet Groper (ping) as taught by Lin in order to monitor proper operation (Lin: col. 11, lines 64 - col. 12, line 2).

Claims 27 and 43 are rejected under the same rationale given above.

Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,781,549 by Dai in view of U.S. Patent No 5,287,461 by Moore in further view of U.S. Patent No. 5,680,324 by Schweitzer et al.

Regarding claim 20,

The Dai and Moore reference teach a computer architecture as recited in claim 12.

The Dai and Moore references do not explicit state intelligent devices as peripherals but do teach DTEs (Dai: col. 4, lines 38-43, Figure 1) which taken to be intelligent electronic devices.

The Schweitzer, III reference teaches peripheral devices that are intelligent electronic devices in communication with a network (Schweitzer: col. 3, lines 22-35).

The Schweitzer, III reference further teaches the invention overcomes limitations of the communications systems allowing information received from ports and other intelligent devices to be stored and retrieved (Schweitzer: col. 2, lines 17-25, 40-44; col. 1, lines 29-43).

Therefore it would have been obvious at the time of the invention to one of ordinary skill in the art to create the multiple port packet switch as taught by Dai and Moore while employing IED as taught by Schweitzer in order to overcome limitations of the communications systems allowing information received from ports and other intelligent devices to be stored and retrieved (Schweitzer: col. 2, lines 17-25, 40-44; col. 1, lines 29-43).

Claim 21 is rejected under the same rationale given above. In the rejections set fourth, the examiner will address the additional limitations and point to the relevant teachings of Moore and Dai and Schweitzer, III.

Regarding claims 21, a computer architecture as recited in claim 20, wherein said intelligent electronic devices are protective relays (Schweitzer: col. 3, lines 22-35).

REMARKS

Applicant has amended the various independent claims with different ways of interrogating by the control unit. The examiner has added additional art to establish lack of novelty the broad claim of interrogating network links. The further defining of interrogating answering the questions what is interrogated, when it is interrogated, and how it is interrogated would help in further defining over the prior art.

The Applicant Argues:

With respect to claims 1, 11, 22, 40; applicant argues that the Dai reference fails to teach the features of claim 1 focusing on a control unit configured to *interrogate* the network links and to communicatively *couple* said communication serial ports to a selected one of said network ports based on the interrogation of the network links.

In response, the examiner respectfully submits:

The examiner still maintains that the Dai reference does teach the limitations as claimed. Applicant has amended claims to explicitly state an active request component in the interrogate stage. This is addressed with the new reference Buyukkoc. In the claims still without the amendment, Dai still teaches col. a controller which monitors traffic over the network. Interrogating without detail is interpreted as monitoring and the prior art meets the breadth of the limitation. Dai also teaches coupling ports. Although Dai does not explicitly teach serial ports, Dai does show coupling of ports to a high-speed network interface through a bridging controller (Dai: col. 2, lines 60-67). The data received is coupled to an outgoing port through the bus which is controlled by the switch packet routing controller.

With respect to claim 30, applicant has incorporated a dependent claim into the independent claim further detailing wherein said control means interrogates plural computers over each of the network links in an alternating manner.

The Dai reference teaches interrogating by monitoring traffic on the cell bus. Since data is placed on the bus in an alternating manner for processing, the switch packet routing controller monitors in an alternating fashion (Dai: col. 8, lines 43-54; alternating putting data on the bus for processing).

The examiner understands the direction of applicant's interrogation invention in a multiple port unit and encourages applicant to do so with as many details as possible.

Prior Art

U.S. Patent No. 5,825,772 by Dobbins et al teaches interrogating network links with Link state packets col. 14 (LSP).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin R. Bruckart whose telephone number is (571) 272-3982. The examiner can normally be reached on 8:00-5:30PM with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on (571) 272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

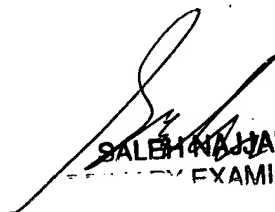
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Benjamin R Bruckart
Examiner
Art Unit 2155

brb

BRB


SALEH NAJJAR
EXAMINER